AR8000
Envelope Feeder

Operator/Technical Manual

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Danvers, MA 01923

Item No: 387

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SECTION 1: Overview

Overview

The AR8000 is designed to continuously feed envelopes/card stock simply by adding media to the Feed Area of the AR8000. The unit may be connected to the Risograph for envelope/card feeding or removed by the operator utilizing the Risograph as a stand-alone unit when feeding normal paper or NCR applications. The AR8000 operating speed automatically adjusts to the speed of the Risograph. This unit feeds from the bottom of the stack allowing the operator to continuously add media without interrupting machine operation.

The AR8000 Operation Panel incorporates a Mode switch which allows the operator to set-up the unit for feeding different media. It also allows a technician to operate the unit off-line when troubleshooting problems. The Speed dial will vary the AR8000 speed during test or set-up to create realistic conditions when feeding different stocks. The Feed switch activates the Feed Clutch (when the Mode selection switch is ON) giving operators/technicians manual feed control. Manual Feed control aids operators and technicians in adjusting or isolating problem areas when skewing, misfeeding or tracking occurs.

Simple thumb screw and sliding feed guide adjustments are provided to accommodate different media applications (see set-up adjustment procedures).

Preventative Maintenance/Service recommendation intervals are equal to that of the Risograph.

Note: Under normal operation, the first envelope must be positioned beneath the Risograph Feed Rollers, in order to continue to feed envelopes.

SECTION 2: Specifications

Specifications

SYSTEM/PROCESS	Roll-up envelope / card feeder designed to enhance the paper feeding capabilities of the GR3750 for increased productivity and versatility. Comes standard with required stand.
FEEDING SPEED	Equal to the speed of the Digital Duplicator.
STOCK SIZE	Minimum 3" X 5"; A6 (76.2mm X 127mm) Maximum 11.7" X 13"; A3 (297mm X 143mm)
STOCK WEIGHT	Minimum: 20lb. envelopes Maximum: 110lb. Index
REGISTRATION	+/- 1mm
FEED CAPACITY	Initial envelope capacity: 500 (#10 Business Envelopes) Continuous top-load, bottom-feed mechanism
ACCESSORIES	Optional Conveyor at receiving end
COMPATIBILITY	Compatible with GR3750 and RISO Stand S-8925
ELECTRICAL	110V/60Hz; 220V/50Hz
ENVIRONMENT	Temperature: 50 - 90 Fahrenheit Humidity: 30% - 90% Relative Humidity
SHIPPING WEIGHT	100lbs.
DIMENSIONS	28.5"W x 17.75"D x 30"H (excluding slide guides)

SECTION 3: Preventative Maintenance

Preventative Maintenance

Description	Part Number	Replacement Interval					
		100K	200K	300K	400K	500K	600K
Separators (5)	90-103-09	X	X	X	X	X	X
Feed Rollers (7)	90-102-21			X			X
Pick-Up Rollers (4)	56-101-02			X			X
Pressure Roller (3)	94-110-02			X			X

Recommended Dealer Stock AR8000

Timing Belts	123-934 / 123-854 / 123-277 / 123-137 / 123-573
Bearing Housing	90-103-52
Castors	123-1182 / 123-1184
Fuses (1Amp. ¼ x ¼)	123-302
Main PCB	65-500-00
Motor Speed PCB	123-1075
Interlock Switch	123-1141
Transport Belts	123-1071 / 123-1072
Main Switch	63-500-10
Speed Control Switch	65-500-10

Optional Conveyor Unit

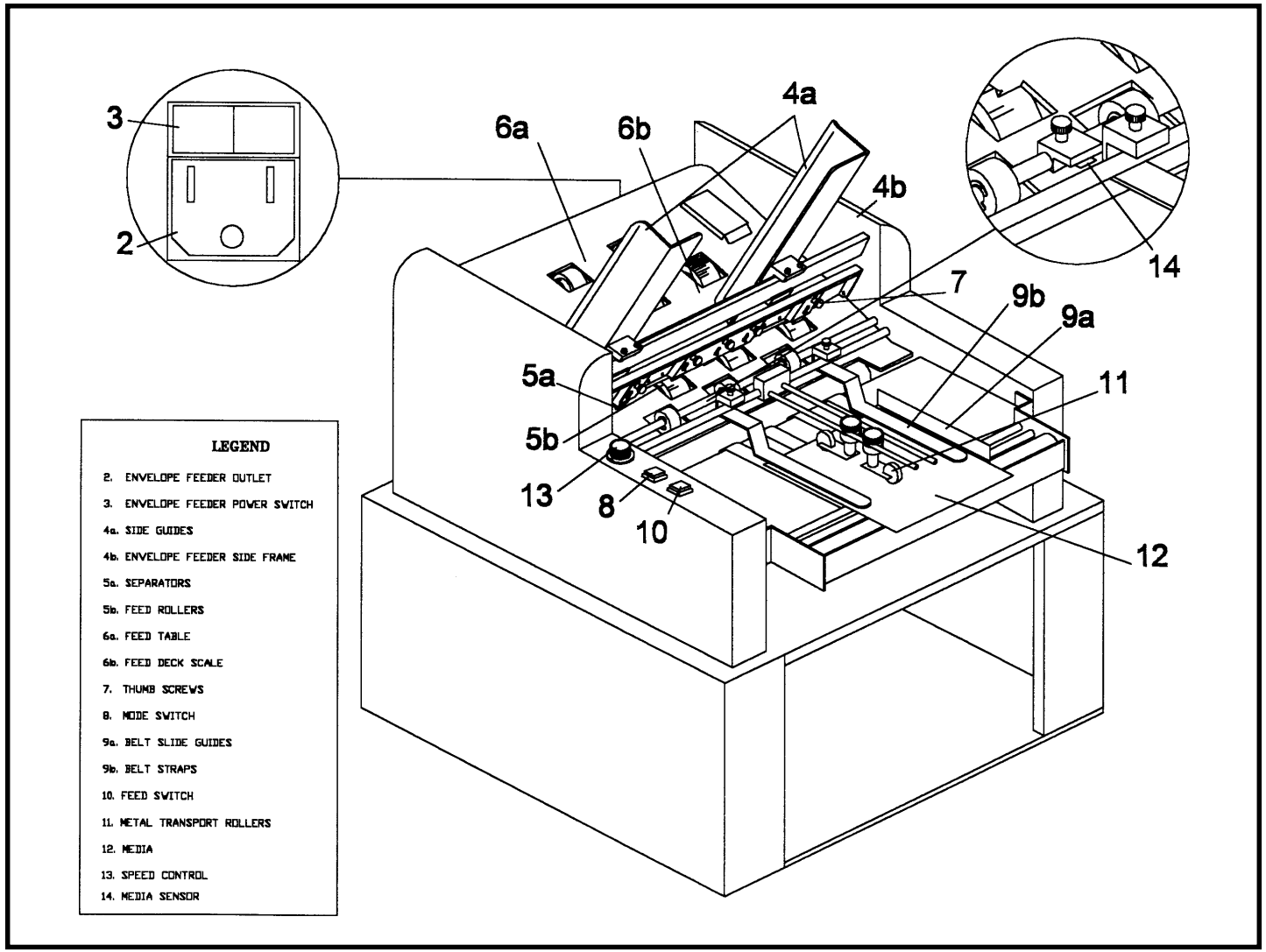
Conveyor Belts (set)	123-309
Main PCB	90-100-500
Drive Motor	CD-401-18
Main Switch	123-664
Speed Potentiometer	CD-301-20

Interface Kit AR8000 Part # 65-500-50 (S-212AS)

Contents		Quantity
Wire Harness, Interface	65-500-20	1
Wire Splice	123-1171	2
Interface Cable	65-500-30	1
Cable Tie	123-113	4
Hook , Non-Operator Side	65-301-10	1
Hook , Operator Side	65-301-09	1
Screw, 8-32 X ¼ FH Phil.	123-126	4
Package, Jack Screws	123-1191	1

SECTION 4: Component Location

Component Location



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Installation & Adjustment Procedures

1. Envelope Feeder Installation Guide

1. Raise the Paper Feed Table and turn off power.
2. Remove the Rear Cover and left Cable Blind Plate Cover.
3. Attach the Envelope Feeder's Harness (RISO Internal Harness) to the left access hole using included Jack screws.
   Note: Keep the flange of the connector toward the outside of the plate.
4. Connect the socket connector of the harness to the RISO Motor Control PCB - CN5.
   Note: The SF 3000 can NOT be used with the Astro Envelope Feeder
5. Connect the Red wire to CN-3 15 (red wire) on the Motor Control PCB using a wire crimp connector.
6. Connect the Yellow wire to CN9-44 (yellow wire) on the System PCB using a wire crimp connector.
7. Attach the Envelope Feeder - RISO Mounting Guide Plates to the RISO frame below the raised Feed Table. All mounting screws should face the rear of the Risograph. (Follow Mounting Bracket Adjustment Procedure on the next Page)
8. Place the Envelope Feeder on the Envelope Feeder Console placing the bearing in the guide rail. Secure the rear of the unit with the bracket and mounting screws.
9. Install the Risograph rear cover.
10. Connect the Envelope Feeder Communication Cable from the rear of the RISO to the Envelope Feeder. The Phone style connector connects to the Envelope Feeder below the right rear cover of the Feeder's Feed Tray.
11. Place the Paper Tray Sensor Cover (P/N 65-301-22) over the Paper Detection Sensor. This Cover is to be removed when the AR8000 is not being used.
12. Mount the Envelope Feeder to the RISO by sliding the alignment pins of the Feeder into the Mounting Brackets installed on the RISO Feed Tray.
13. Level the Envelope Feeder using the Feeder's Casters.
    Note: The front casters should barely contact the floor. This will ensure that the Envelope Feeder locks into the mounting bracket (make sure Bracket Height Adjustment Procedures were followed and that LED1 on the Motor Control PCB2 is on).

The Installation is complete. Make the necessary adjustments for your application. Run a functional check to ensure proper operation.

NOTE: Maximum size envelopes should be run on Risograph Speed 1, 2, or 3.

NOTE: When feeding multiple envelopes under normal operation, the first envelope must be positioned beneath the Risograph Feed Rollers.

NOTE: The Risograph must be installed on Machine Stand: S-8925

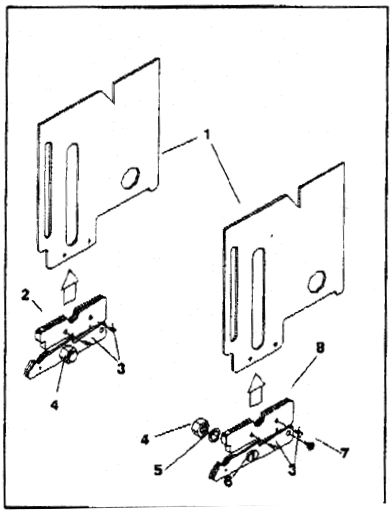
2. Mounting Bracket Adjustment

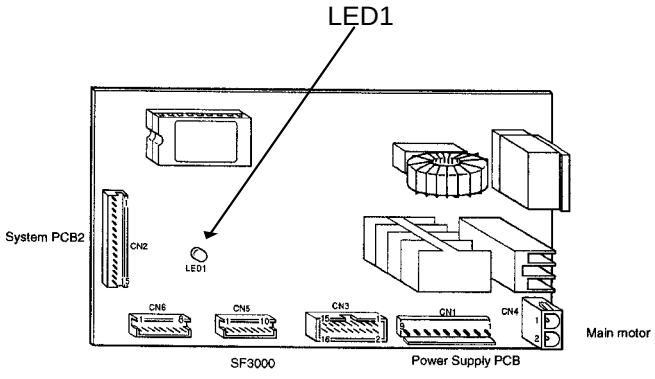
1. Loosen Nut (4) on the Hook Assembly (8) and (2).
2. Attach Hook Assemblies (8) and (2) to the Risograph GR3750 (see Figure 1-1).
   Note: The Later Model Risographs do not have pilot holes drilled in the frame to mount the AR8000 Mounting Bracket. To install the brackets simply hold the Mounting Bracket in place, scribe 2 marks on the front and 2 marks on the rear of the Risograph frame, remove the Mounting Brackets, and drill ¼" holes.
3. Lower the Paper Tray on the Risograph GR3750 (1).
4. Attach the RISO Envelope Feeder to the Risograph GR3750 making sure the Hook-Up studs are lying in the notches of the Hook Assemblies (8) and (2).
   Note: The front wheels of the AR8000 Stand should be slightly off the ground.
5. Turn the eccentric screw (6) on the Non-Operator Side Hook Assembly (2) until LED on the Motor Control PCB2 (Risograph GR3750) first turns on (see Figure 1-2).
6. Repeat for eccentric screw (6) on the Operator Side Hook Assembly (8) making sure that the screws are in the same position on both sides (ensure the Feeder is level).
7. Recheck that the LED on the Motor Control PCB2 is on.
8. Remove the RISO Envelope Feeder and tighten Hex Nuts (4) on Hook Assemblies (8) and (2).
9. Repeat Step 4 and make sure the LED on the Motor Control PCB2 (Risograph GR3750) is on.

If the Risograph remains in "Add Paper": Place the Paper Tray Sensor Cover (P/N65-301-22) over the Risograph Paper Detection Sensor.

If media does not feed when Risograph cycles: Make sure LED1 (on Risograph Motor Control PCB2) is ON. If it isn't, adjust AR8000 Height via mounting Brackets until the LED turns ON. Ensure the first envelope is under the Risograph Feed Rollers.

If Risograph is in a T-2 condition: Check if both Safety Switches are actuated. Ensure the Risograph and AR8000 are locked together properly.





General Adjustments

The Mode Switch turns on the AR8000 for setup also to operate the unit off-line from the Risograph. The Feed Switch and Speed Control are for setup only. The Risograph will control the AR8000 speed during operation. The Feed Switch allows one envelope to feed. The Speed Control allows the operator to test the stock feed capabilities at various speeds.

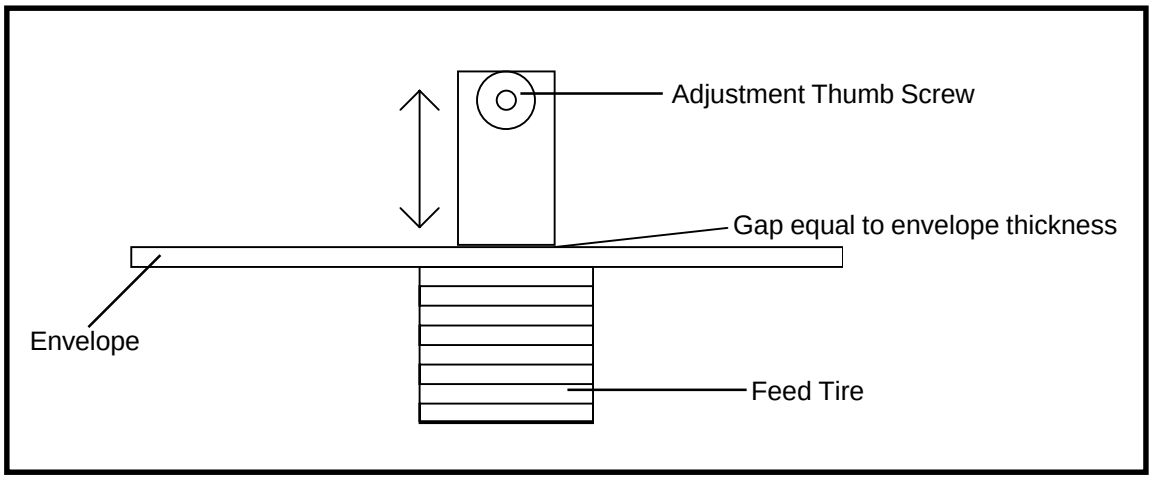
NOTE: One piece of media must be in the GR3750 Pick-Up Rollers before starting a job! The Paper Tray Sensor Cover (P/N 65-301-22) must be positioned over the Paper Detection Sensor on the Risograph Feed Tray.

3. Setting the Stripper Height

The Stripper Height is set by placing one envelope beneath the Stripper and dropping the Stripper onto the Envelope. Next, tighten the Stripper Mounts. There are five Stripper Units and only one set of Strippers is used at a time. Outer Strippers for large envelopes or two Inner Strippers for smaller envelopes. The Center stripper is used for Card Stock.

If the Stripper Gap is too small: Skewing or improper feeding will result.

If the Stripper Gap is too large: Multiple Envelope feed or skewing may result.

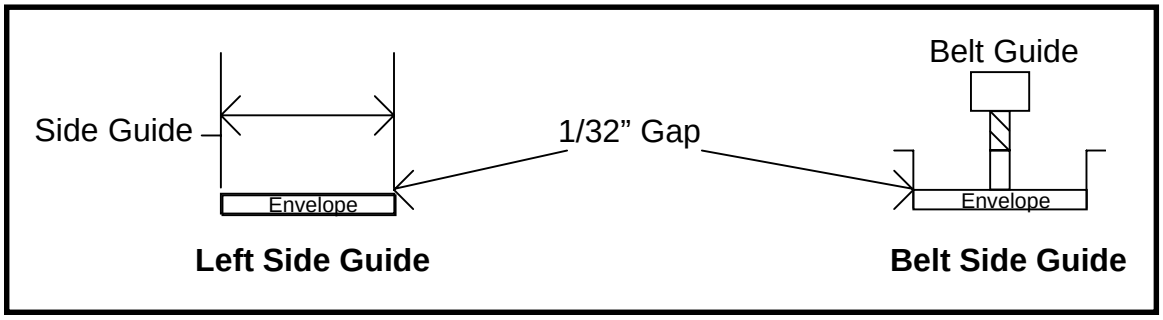


4. Setting the Envelope Side Guides

The Envelope Side Guides are designed to prevent skewing. Left side guides are adjusted by placing an envelope on the Feed Table and closing the side guides in on the Envelope. The Belt Side Guides are adjusted by noting the SCALE position of the Left Side Guide and placing the Belt Side Guides accordingly.

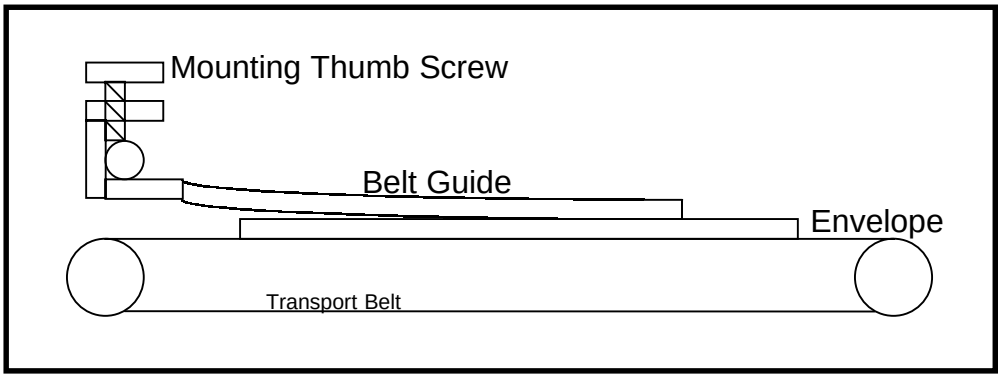
Note: The Belt Transport Motor has to be **ON** when adjusting the Belt Side Guides. Slide the Guides slowly or the Transport Belts may jump from their Positioning Guides. **A 1/32" gap is required between the envelope and side guide.**

At this time you are ready to Test Feed one Envelope. Switch the Power on (press Mode) and press the belt rotation switch. The bottom envelope should feed to the Scraper and Pick-Up Roller of the Risograph. If not, re-adjust the Side Guides or Stripper Units.



5. Envelope Belt Guide Adjustment

The Belt Guides hold the Envelopes down on the Transport Belts. To properly position the Belt Guides, place one Envelope underneath both front and rear guides, loosen the mounting thumbscrew until the Belt Guide has a slight drag on the Envelope. Tighten the Thumbscrew.

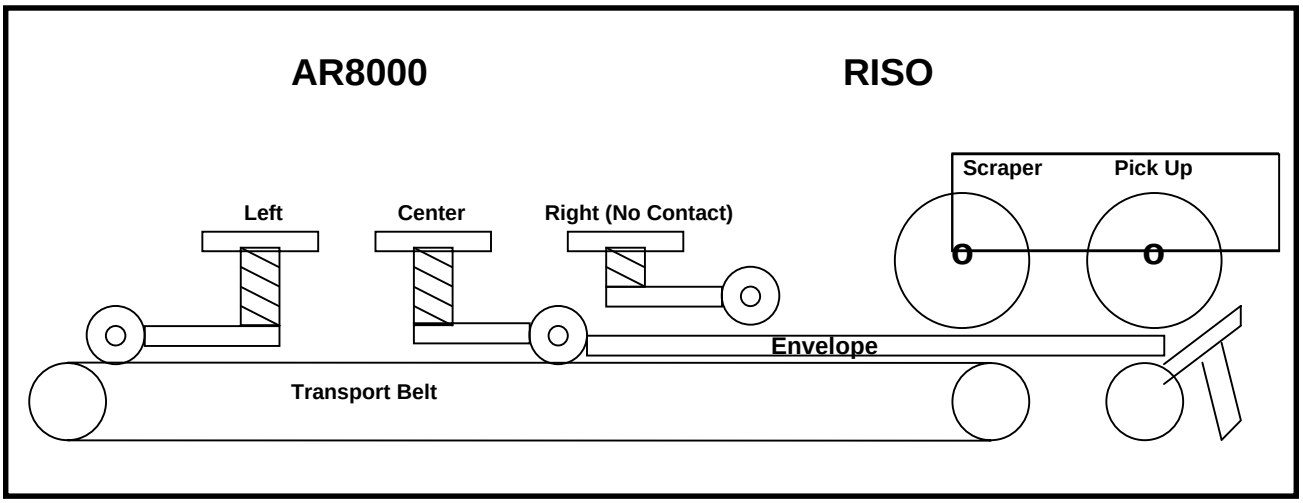


6. Metal Transport Rollers

Three metal transport rollers are responsible for transporting the envelope to the Feed Roller of the Risograph. The objective is to feed the envelop, until the envelope is in the bite of the RISO Feed Roller. There are 3 Transport Rollers. Depending upon the size of the envelopes, one, two or three Transport Rollers may be used. When the Transport Rollers are properly adjusted, the Roller should be at the trail edge of the envelope (riding on the Transport Belt of the AR8000) when the envelope is in the bite of the RISO Feed Roller. Each one of the three Metal Transport Rollers may be adjusted forward, back, up or down
.

If the Right Transport Rollers is adjusted too low: Envelopes may accordion or bow.

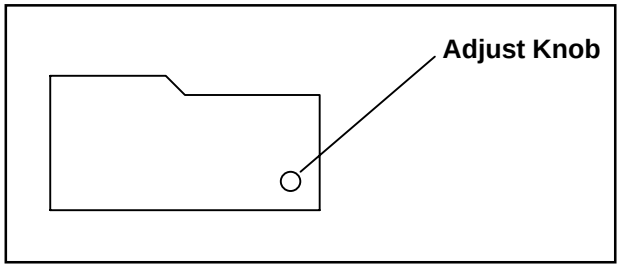
If the Transport Rollers are adjusted too high: Envelopes will not feed to the Risograph Feed Rollers.



Note: Transport Rollers are adjustable Up, Down, Right or Left.

7. Side to Side Registration

Side to side (Horizontal Registration) is adjusted from the rotary dial at the front right base of the Feeder Unit. Clockwise brings the paper forward toward the operator, counter-clockwise brings the paper back toward the rear of the machine.



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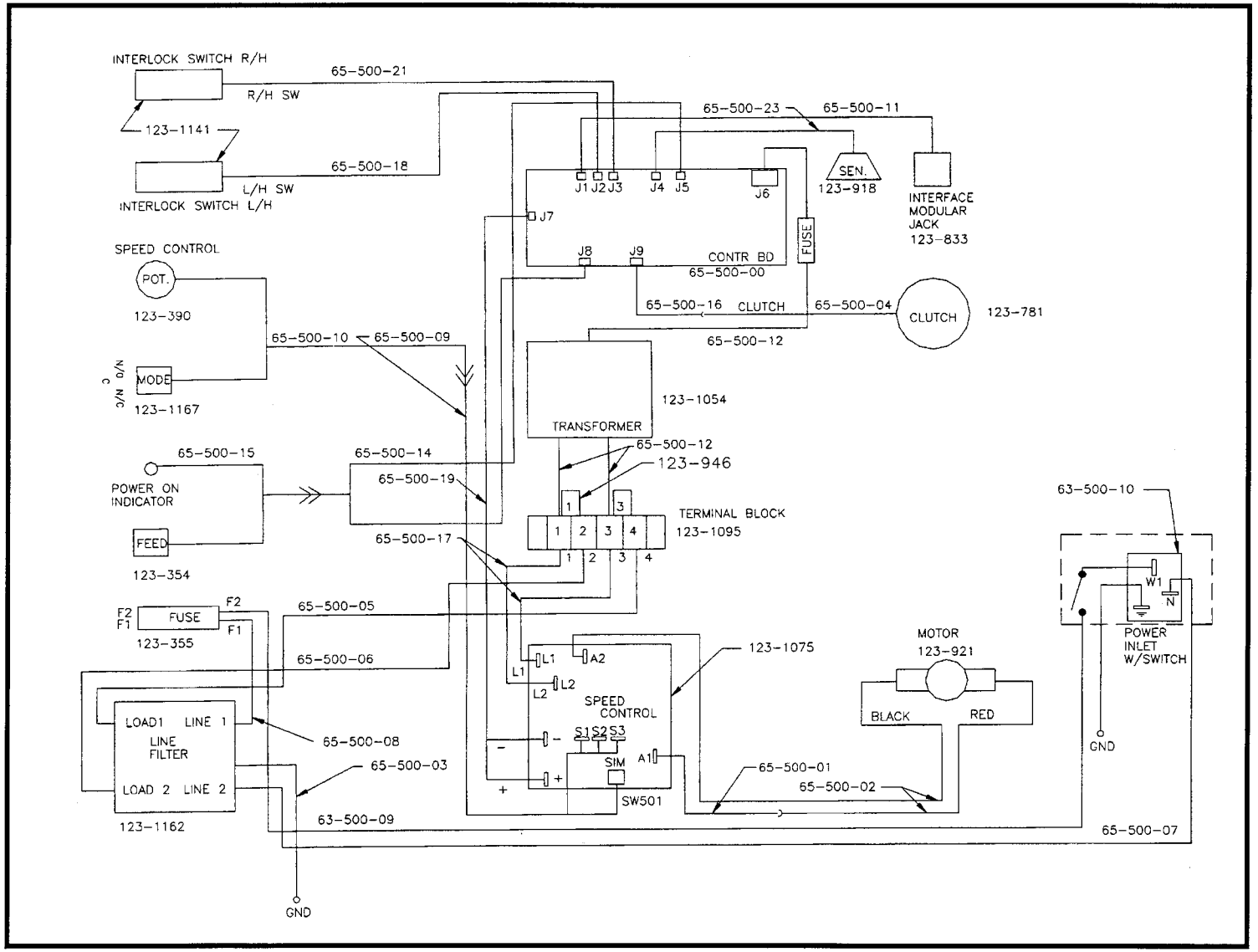
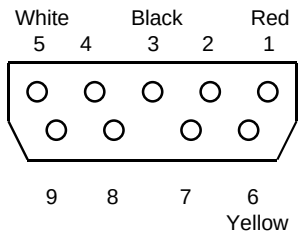
1. Point to Point



2. Interface Cable Connection

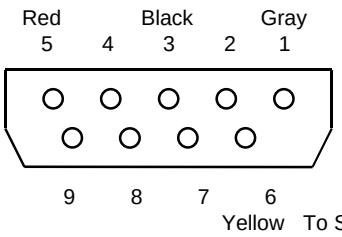
Interface Cable Connection

Rear Machine Harness
External - to Astro



White to Red
Black to Black
Red to Gray
Yellow to Yellow

Rear Machine Harness
Internal - to Risograph

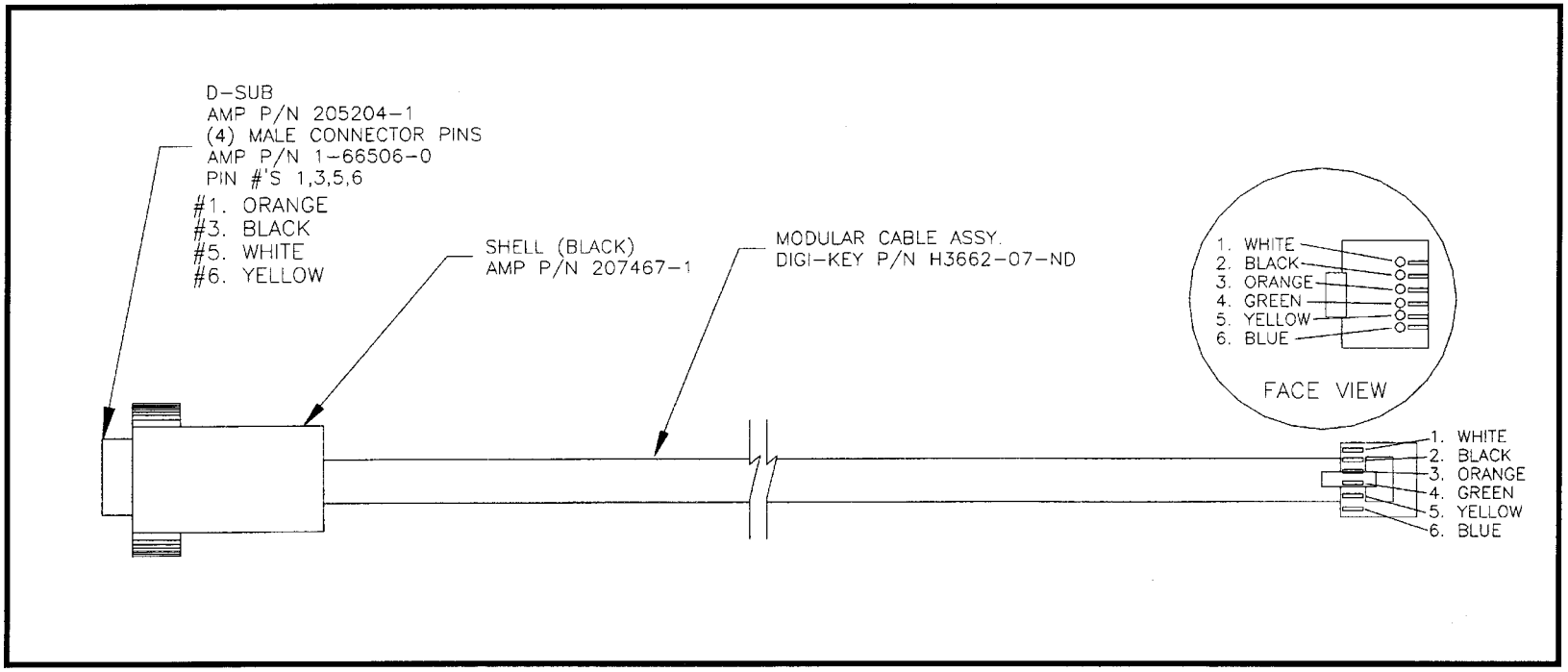


Red to Mtr . PCB CN 3-15
Black to Mtr. PCB CN5-1,6,7
Gray to Mtr. PCB CN5-9

To Sys. PCB CN9 - 44

This connector is 1 to 1 straight through wiring.

3. Interface Cable



SECTION 7: Troubleshooting

Troubleshooting

Problem	Possible Cause
No Power	Check the wall outlet Check the AR8000 Circuit Breaker Check the Power Supply PCB or Main Fuse Check the Power Switch
Side to Side Registration out	Adjust Registration Dial AR8000
Media does not feed	Improper setup of Separator Glazed or dirty Feed Rollers Check for Proper Risograph -Table Height (LED1, ON, Motor Control PCB) Check for proper connection to the Paper Feed-Detection Circuit. (Yellow Wire) Check AR8000 Harness for proper wiring Check Feed Clutch Operation Check Media Sensor for Proper Operation Is the Media Sensor exposed to light Check Replace Fuse 1 AR8000 Control PCB Replace the AR8000 Control PCB Improper Setting of the Metal Transport Rollers Side Guides too tight
Media skews when feeding	Side Guides too loose Strippers not set even Improper Setting of the Metal Transport Rollers Check for obstructions in Envelope Path
T2 Error Risograph	Ensure the AR8000 locks into the Risograph Check Safety Switch #1 and Safety Switch #2 Check / Replace the Interface Harness Check / Replace Control PCB

SECTION 8: Parts Layout

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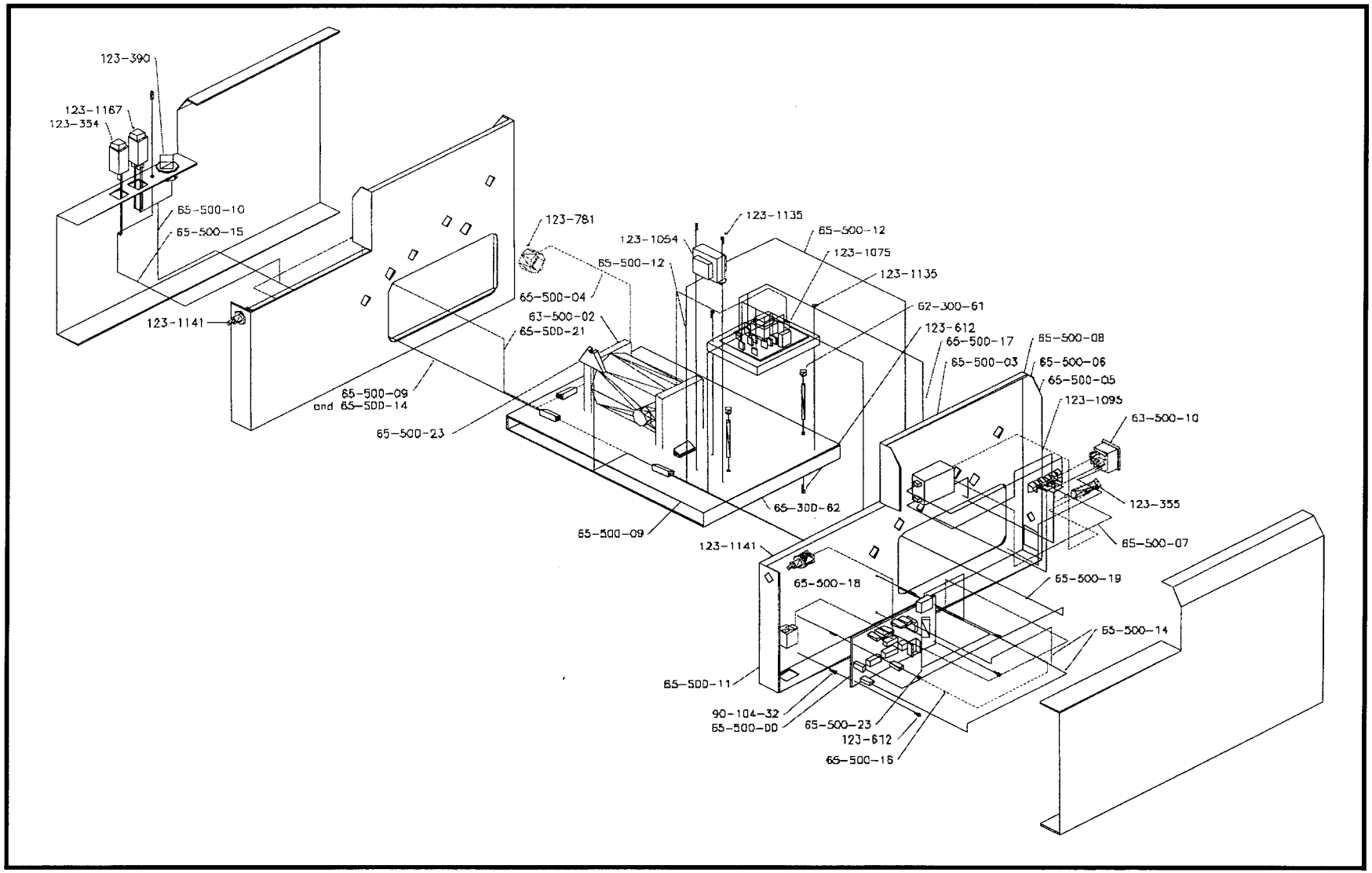
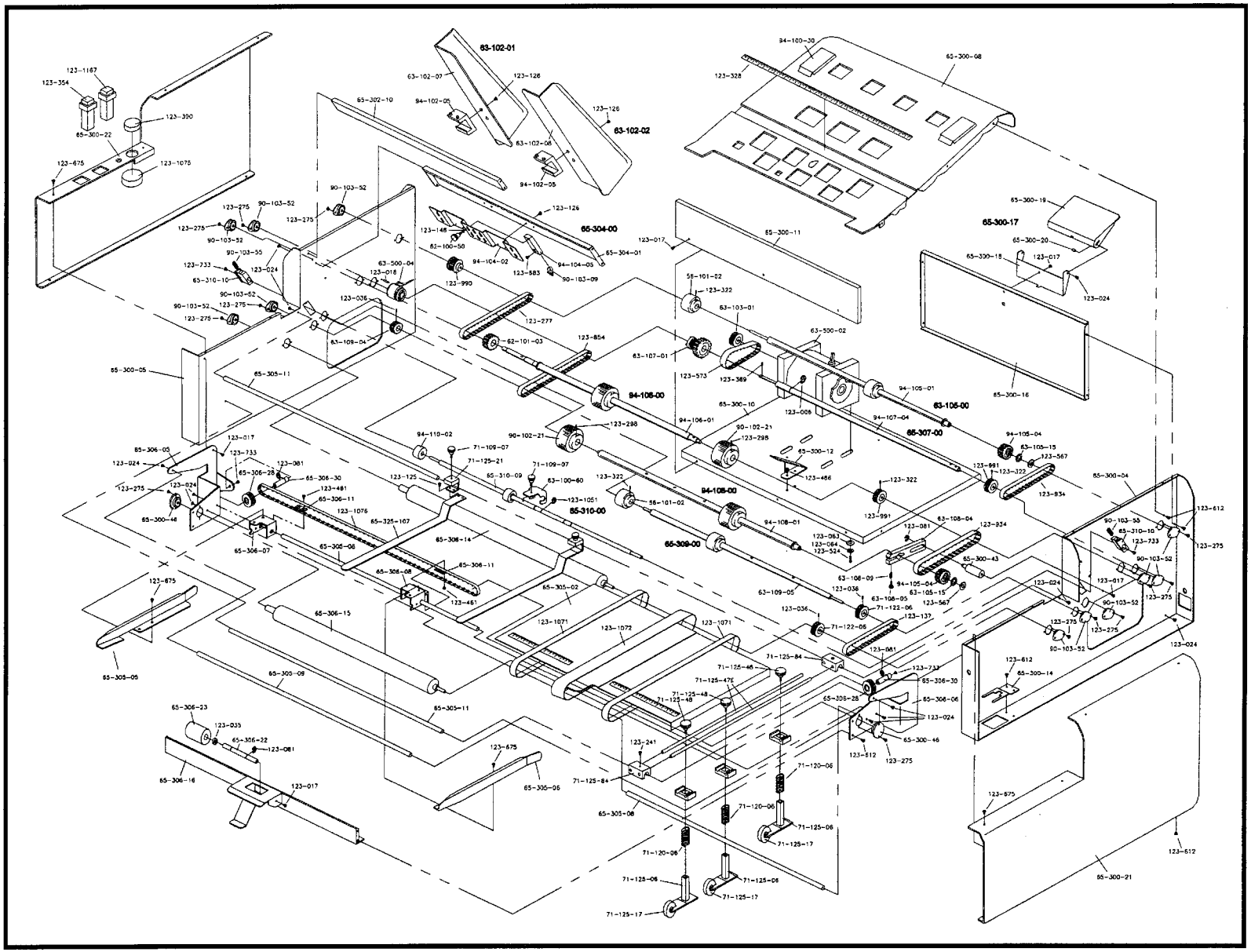
2. Mechanical 8-2
3. ConsoleAR8000 envelope Feeder 8-3

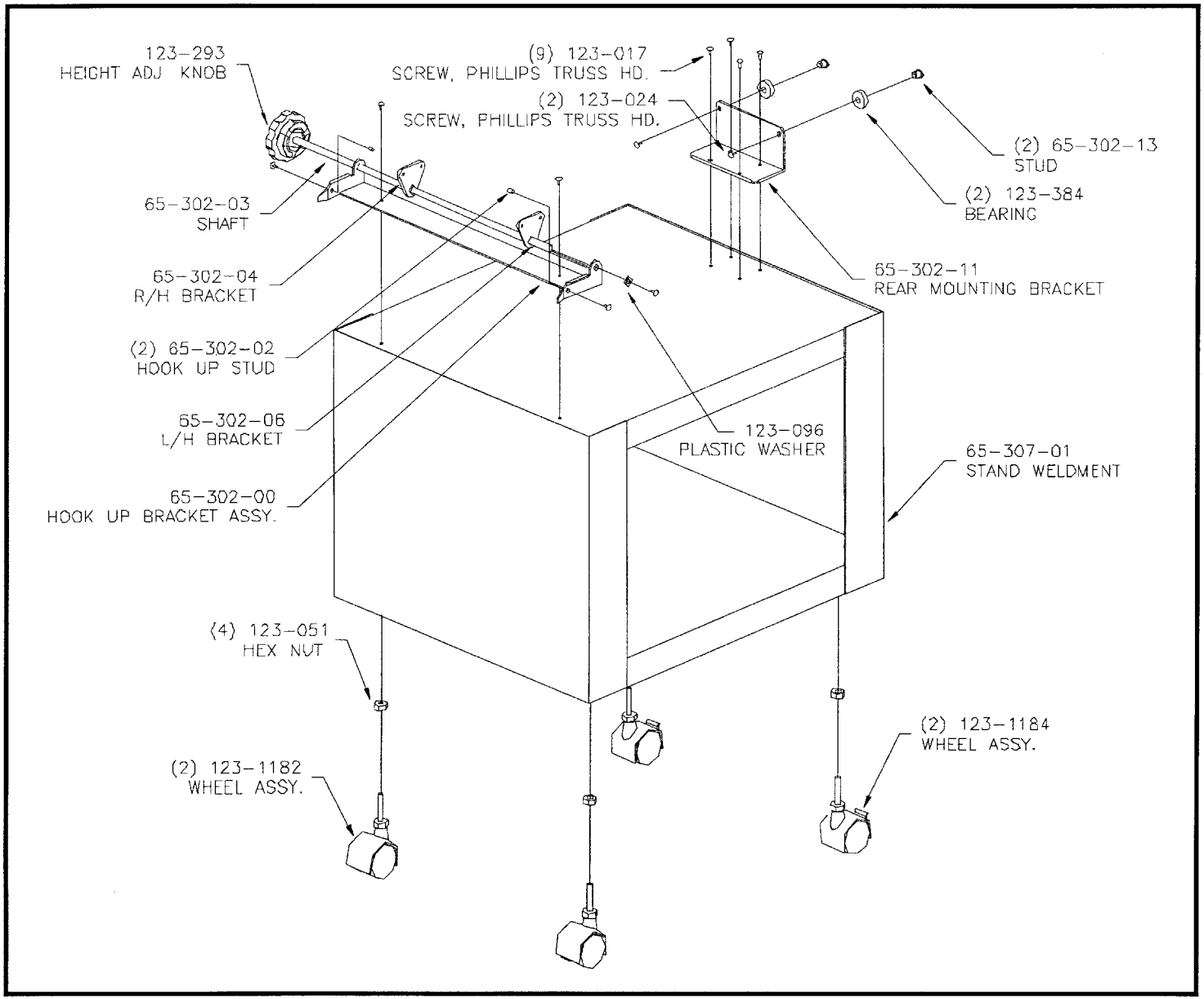
1. Electrical



2. Mechanical



3. Console


123-293
HEIGHT ADJ KNOB
(9) 123-017
SCREW, PHILLIPS TRUSS HD.
(2) 123-024
SCREW, PHILLIPS TRUSS HD.
(2) 65-302-13
STUD
(2) 123-384
BEARING
65-302-03
SHAFT
65-302-04
R/H BRACKET
65-302-11
REAR MOUNTING BRACKET
(2) 65-302-02
HOOK UP STUD
65-302-06
L/H BRACKET
123-096
PLASTIC WASHER
65-307-01
STAND WELDMENT
65-302-00
HOOK UP BRACKET ASSY.
(4) 123-051
HEX NUT
(2) 123-1184
WHEEL ASSY.
(2) 123-1182
WHEEL ASSY.